short time, life could still be restored by the use of a continuous current. The experiments on frogs were of great interest, as the various stages of the effects could be distinctly recognized, especially if the heart were previously exposed. As the exhibition of the anæsthetic was continued, the beats diminished in force and number and then ceased; if a continuous current were now used, the beats recommenced. A frog was left to itself for twenty-four hours after complete chloroform anæsthesia; the heart was then quite immobile, and although a continuous electric current could not cause any contractions of the voluntary muscles, it caused a renewal of the heart's action.—*Journal of Anatomy and Physiology*, May, 1868.

SURGICAL PATHOLOGY AND THERAPEUTICS, AND OPERATIVE SURGERY.

30. *Cure of Axillary Aneurism by Slight Compression.*—Dr. BECK has reported a remarkable case of a man who was affected with an aneurismal dilatation of the right axillary artery of fifteen months' duration, and whose left subclavian artery was absent, the left superior extremity being supplied by the ascending cervical, transverse scapular, and costo-cervical vessels. In consequence of this anomaly, and also of symptoms of slight aortic dilatation, Dr. Beck did not venture to tie the right subclavian, but treated the axillary aneurism by placing his patient on a low and farinaceous diet, in order to reduce the force of the circulation, and, by compressing the tumour with a broad band of caoutchouc and several turns of a bandage. The patient left the hospital at the end of ten days, but continued to wear the elastic band for two months, during which time the pulsations of the aneurism gradually ceased, the tumour became small and hard, and the fingers of the right hand became livid and wasted. A complete cure was the result.—*Brit. Med. Journal*, from *Deutsche Klinik*, No. 44, 1867.

31. *New Apparatus to Obtain Alternating and Elastic Compression of Arteries.*—Dr. CH. SARAZIN, Prof. agrégé of the Faculty of Medicine of Strasbourg, gives (*Brit. Med. Journal*, March 14, 1868) the following description of a compressor devised by him, "with which it will be easy to obtain alternating and elastic compression of all arteries accessible to indirect compression.

"Let the part of the limb which is to be submitted to compression be surrounded with a layer of wadding or a flannel roller, and then with two or three rollers stiffened with dextrine, or, still better, with silicate of potassa. Any solidifiable mixture which stiffens properly would do as well. The limb is thus inclosed, but not compressed, in an immovable apparatus exactly moulded upon it. When the bandage is stiff, the course of the artery should be delineated on its surface; and along the line thus traced, two oval traps, of the size of common compress-pads, should be cut. These pads are to be made of cork, from two to three inches thick, according to the depth which their action is intended to reach. Placed alternately on the course of the artery, and separated from the skin by the layer of wadding or the flannel, they are fixed with an India-rubber roller, of which the turns, as they are added one above the other, increase at will the compression of the artery without compressing the limb, protected as it is by the bandage. Inside the stiffened bandage may be inserted, if thought fit, the wooden wedge with which B. Anger endeavours to prevent the artery from escaping from the compressvie action applied. It might as well be applied outside the bandange before it is stiffened, and when this is depressed and sufficiently hard it should be taken away.

"To judge of the comparative value of this apparatus, I shall state in a few words the conditions which a good compress must fulfil.

"1. The limb should be well secured to prevent the compressive pads from being deranged. It is evident that an apparatus enveloping completely the limb, and moulded upon it, will be in better conditions of fixity than counter-pressure pads, or even than padded splints.

"2. The counter-pressure must bear on a large surface to avoid pain. An apparatus moulded on the limb is more likely to obtain this result than padded splints, and particularly more so than counter-pressure pads.

"3. The compression must be energetic at will, and alternating. It will be made as powerful as may be required, while it retains all its elasticity, by multiplying the turns of the India-rubber roller which passes over the pads.

"4. The compression must be continuous and alternating, to prevent the same point of the skin over the artery from bearing all the compressive effort. The compressive action is made to bear on one pad or the other at will; and even more than two pads might be used if it were thought fit.

"While all other apparatus extant require immobility of the limb, this one does not; and the surgeon is not needed to fix and tighten the pads, it being impossible for them to become placed by the side of the artery outside the traps cut out to receive them."

32. *Statistics of Amputation.*—Prof. J. F. HEYFELDER furnishes a contribution to this subject derived from twenty-two years' (1841–63) hospital practice in three different places, viz., Erlangen, Helsingfors, and St. Petersburg.

1. In the surgical clinic of Erlangen, during the years 1841–54 there were performed 127 amputations, with 101 recoveries, and 26 deaths. Of these, 55, with 35 recoveries and 20 deaths, were amputations in continuity; and 72, with 66 recoveries and 6 deaths, were amputations in contiguity or disarticulations. Of the 55 amputations, 10 related to the arm, with 4 deaths, and 25 to the leg, with 8 deaths, 4 to the forearm, with no deaths, 16 to the thigh, with 8 deaths. Of the disarticulations, the shoulder supplied 4 cases, with 2 deaths, and the hip 8 cases, with 4 deaths. The remainder were operations on the foot and hand, all terminating successfully.

2. In the Military Hospital at Helsingfors, the reporter performed during 1855–56, 39 amputations in continuity, with 14 recoveries and 25 deaths, viz., 4 of the arm, with 1 death, 4 of the forearm, with no death, 18 of the thigh, with 15 deaths, and 13 of the leg, with 9 deaths. There were also 24 disarticulations, with 12 deaths, 15 of these being amputations at the shoulder-joints, with 4 deaths, and 2 amputations at the hip-joint, both fatal.

3. In the First Military, Workmen's, and Children's Hospitals of St. Petersburg, there were performed during 1856–63, 61 amputations in continuity with 26 deaths, viz., 5 of the arm, with 2 deaths, 9 of the forearm, with no deaths, 14 of the thigh, with 10 deaths, and 23 of the leg, with 14 deaths. The disarticulations amounted to 43, with 18 deaths, among these there being 5 operations on the shoulder, with 2 deaths, 3 on the hip, and 6 on the knee, all fatal.

Viewed together, it results from these figures that 1, the issue of amputation of the forearm was highly favourable, since the whole 17 cases recovered. 2. Next comes that of the arm, 12 recovering and 7 dying of 19 cases; the mortality being 40 per cent. at Erlangen and St. Petersburg, and 25 per cent. at Helsingfors. 3. Amputations of the leg were 61 in number, with 30 recoveries and 31 deaths; the mortality being 32 per cent. at Erlangen, 69 at Helsingfors, and 64 at St. Petersburg. 4. Amputations of the thigh amounted to 48, with 15 recoveries and 33 deaths, viz., a mortality of 50 per cent. at Erlangen, 83 at Helsingfors, and 71 at St. Petersburg. 5. With respect to sex, of the 155 amputations 136 were performed on males, and 19 only on females; and the comparative mortality was at Erlangen 75 per cent. for the males, and 25 per cent. for the females. At Helsingfors they were all males, and the two females at St. Petersburg both recovered. 6. The amputations were performed at Erlangen for traumatic causes in 14 cases, and for chronic organic disease in 41. The former ended fatally in 6 cases, or 42 per cent., and the latter in 14 cases, or 34 per cent. At the Helsingfors Military Hospital, 30 of the 39 amputations were performed for injuries, with a mortality of 25, or 64 per cent. At St. Petersburg, 30 of the 61 amputations were for injuries, with 26 deaths, or 86 per cent. The 25 amputations for disease all terminated well. 7. The ages of the patients are not specified, the reporter only mentioning that the